

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-028278**Date Inspected:** 27-Aug-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** As noted below.**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower**Summary of Items Observed:**

Quality Assurance Inspector (QA) William Clifford was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

Electroslag Weld Excavation

This QA observed ABF/JV welding personnel James Zhang #6001 continued performing excavation of an Electroslag Weld (ESW) repair previously Magnetic Particle Tested (MT) by Quality Control (QC) technicians.

The MT discovered indication was found to be oriented in the longitudinal position along the toe of the repair weld.

The weld being excavated is designated as "ESW F" and was excavated on Face B at location:

Weld "F" – Y= 3270mm, L= 360mm, W= 50mm, 41mm.

The carbon arc gouging process, as well as machine grinding, are being used to excavate this weld. At random intervals both QA and QC performed Magnetic Particle Testing (MT) to determine if the rejectable indication had been removed.

Please see attached photographs for more information.

Electroslag Weld Repair

This QA randomly observed ABF/JV qualified welder Xiao Hua Lu #1291 performing Shielded Metal Arc Welding (SMAW) with 3.2mm" diameter E7018H4R electrode and implementing Caltrans approved Welding Procedure Specification's (WPS) ABF-WPS-D15-1000-R. The joint being welded was tower shear plate designated as ESW weld, location "F" from face B.

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Dimensions excavated for these repairs were:

Weld "F" – Y= 3270mm, L= 360mm, W= 50mm, 41mm.

During welding, ABF Quality Control (QC) Andrew Keech was noted monitoring the welding parameters.

Ultrasonic Testing of ESW

ESW E, Face B:

This QA performed Ultrasonic Testing (UT) on approximately 1000mm of Tower Electroslag Complete Joint Penetration (CJP) shear plate weld designated as "ESW E" face B. Location (Y=6000~7000) of this weld was inspected using this testing method.

This weld was previously accepted by QC Ultrasonic technicians in accordance with supplemental procedure SE-UT-D1.5-CT-108-ESW-R5.

This QA observed seven (7) recordable longitudinal indications at the time of testing.

This QA observed five (5) recordable transverse indications at the time of testing.

This QA observed two (2) rejectable longitudinal indications at the time of testing.

This QA generated a TL-6027 UT report on this date.

This QA performed UT of weld designated as ESW W in accordance with the approved supplemental procedure. This testing was performed in tandem with QC technician Andrew Keech. Tandem report for work performed on this date will be completed by QC technician and signed by both QA/QC parties. Items listed on tandem report reflect indications agreed upon by QA/QC. Due to QA/QC disagreement on indication interpretation, tandem report may not reflect all indications discovered by QA at time of testing. Please see TL-6027 for complete listing of QA recorded indications.

ESW RWR Tracking

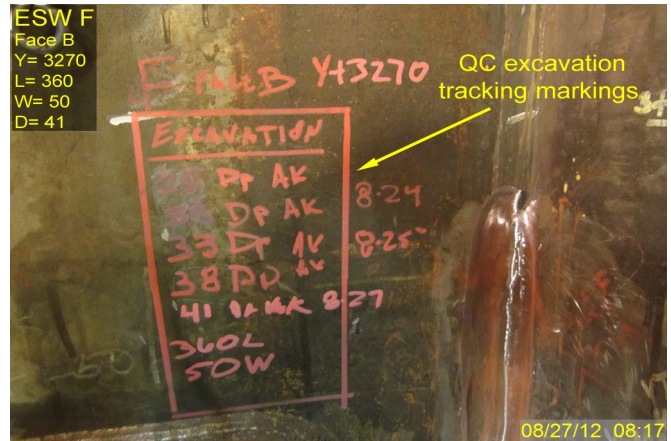
This QA was instructed by Task Leader Bill Levell to generate a spread sheet for the tracking of Request for Weld Repair (RWR) forms submitted by ABF for the repair of Electroslag Welds located at the base of the Tower.

This assigned task requires review of all submitted RWR's as well as review of approved QA TL-6031 report forms applicable to this welding, testing, and repair. This QA used the balance of time not allocated for in-process inspection and testing to work on this task.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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Summary of Conversations:

Conversations were relevant to work performed.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By: Clifford, William

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer